THE TECH

VOL. XXVII. No. 23 BOSTON, MASS., FRIDAY, NOVEMBER 22, 1907 PRICE THREE CENTS

BASKET BALL SQUAD DEVELOPING RAPIDLY.

BEST MEN NOW SHOWING UP.

Shooting and Passing Have Improved a Great Deal.

Good form and endurance is being rapidly developed by the basket ball squad. One or two new men have reported. Short practise at shooting baskets, followed by an hour's steady scrimmage is the daily program. The practice days have been cut down to Tuesday, Wednesday, and Saturday owing to the formation of gymnasium classes.

At present Cahill and Hartgraves seem to have the call for forward positions, with Parker, Fernstrom and Pettengill as alternates. Pierce is undoubtedly the best man at centre, and Stuart can be developed into a good substitute. Wentworth and Nichols look good for backs, although Gregory and Ruckmann are also playing well.

Shooting and passing have improved a great deal, and fouling is not nearly as noticeable as at first. Indications point to a snappy, well-balanced team.

DEMAND FOR SUGAR ANALYSTS.

Graduates of Course Well Located.

The class in fourth year analysis this term is the largest in the history of the course. Twenty-two men are taking the work. The demand for men trained in this branch of technical chemistry has been so great that for several years the number of positions open in West Indian sugar houses has exceeded the number of graduates.

Mr. Geo. W. Rolfe, instructor in charge of the course, has been actively engaged in sugar work in th West Indies for a number of years. On completion of this term's work at the Institute, Mr. Rolfe goes to Aguiere, Porto Rico, to take charge of the plant of the Aguiere Co. He returns to the Institute at the close of the sugar refining season.

Several former students of sugar chemistry are holding prominent industrial positions as chief chemists and factory superintendents. D. B. Weston, 1895, is with the Trinidad Co., Trinidad, Cuba; Knight, 1899, and Shapely, 1900, are in Porto Rico; L. W. Seidenstricke, 1898, is now chief chemist for Arbuckle Bros. C. P. Underhill, 1904, is with the Hawaiian & California Sugar Co., at Crockett, Cal.

Mr. G. F. Ulmer, 1898, one of the most successful of the younger men in the sugar industry, died in September. Mr. Ulmer was superintendent of the Hawaiian & California Refinery, and had for eight years been chief chemist for the Arbuckle Brothers' Refinery.

TECH LECTURER TO GIVE LONG COURSE.

C. Howard Walker Will Talk on Decorative Art.

C. Howard Walker, special lecturer on the history of ornament in the Architectural Department, will give all but three of the series of twenty-one illustrated lectures on decorative art held under the auspices of the school of design of the Museum of Fine Arts at Huntington Chambers. He will lecture at 3 P. M. on Nov. 25, and on the first three Mondays of December, and the first three Fridays of January on the early development of decoration starting with "Egyptian Art as Related to the Collection in the Museum of Fine Arts." His other lectures through the spring will be on the ornamentation at different periods of history, ending April 20 with "The Artistic Progress in America."

NEW MATH BOOK BRINGS BETTER RESULTS.

CARRIES VARIOUS BRANCHES FORWARD SIMULTANEOUSLY.

For That Reason Student Understands His Work Better.

To the students in mathematics at the Institute as well as other scientific schools there has always been evident a lack of connection between the various branches of the study in the actual teaching. The branches are intimately connected and correlated but in the instruction, with each branch taken up as a separate study, this intimacy is not usually brought to the student's attention.

To bring to the student a full realization of this correlation between algebra, analytic geometry, trigonometry and calculus and to enable the student to obtain a better mathematical grasp of his work in applied mathematics, are the purposes of the new mathematics book used in the Freshman year at the Institute, the first volume of "A Course in Mathematics" by Prof. F. S. Woods and Prof. F. H. Bailey of the Department of Mathematics.

A great amount of attention has been called to this new book in other engineering schools and it has been highly commended by various engineering journals. This volume is the most important American outcome of the deep impression recently made by advocates of a reform in the methods of teaching mathematics.

Such instruction may be viewed from two distinct standpoints. If the purpose of the instruction is to introduce the student to mathematics as a branch of pure science, in which he may later carry on research work, the best method may possibly be different from those adapted to acquainting a prospective engineer with one of the most useful helps science has to offer him.

It is generally held today that without any sacrifice of accuracy, the methods of instruction best adapted for the mathematical classes in a technical school are those which carry forward various branches simultaneously.

In the old methods of instruction it was customary to finish algebra before taking up analytical geometry, to finish analytical geometry before taking up the calculus, and to finish the calculus before beginning applied mechanics. As a result it was only the students with good mathematical memories who were able to appreciate as fully as desirable the relations between the various branches.

Such a plan has been entirely abandoned in this new course for the Freshmen at the Institute, which, it should be stated, was prepared at the invitation of Prof. H. W. Tyler, head of the Department of Mathematics, and has received the benefit of his criticism.

In the first volume, which alone has appeared as yet, there is an introductory chapter on elimination, including the use of determinates. The student next takes up the methods of plotting functions, and is thus introduced early in his course to this valuable practical method of understanding an equation.

The study of the algebraic polynomial, including the analytic geometry of a straight line, the more important theorems of the theory of equations, and the definition of a derivative comes next. This enables the student to obtain early an introduction to the principles of calculus which is particularly desirable.

The study of the algebraic function in general is next taken up, and in doing so the student's knowledge of analytic geometry and calculus is enlarged by new applications of the principles previously stated. Simple integra-

(Continued on page 3.)

"OVER THE GARDEN WALL" IS SHOW.

WESTERVELT 1908 WINS SHOW COMPETITION.

Large Number of Men Out For Music and Lyrics.

"Over the Garden Wall" by George Conrad Westervelt 1908 is the show selected for this year, out of the four handed in. Westervelt is a graduate student from Annapolis taking the course in Naval Architecture. The others who had written plays are Ralph J. Batchelder 1908, Henry A. Hale 1910, and Abram H. Ginsberg 1909.

Work on the Show is now fairly begun. A meeting last Tuesday of those who wished to write music or lyrics or to try for the management brought out an unusually large number of competitors in each department. About thirty gave their names to secure the necessary data for writing music or lyrics. Westervelt, the author, has written lyrics but these will be entered in the regular competition with the rest.

Thirteen men applied for the position of business manager. They were, W. D. Everett 1910, S. M. Ratzkoff 1911, G. B. Ferristall 1911, A. A. Gould 1910, S. B. Copeland 1911, Frank Russell, Jr., 1911, J. W. Brady 1911, W. C. Wilson 1910, A. W. Carney 1911, H. L. Robinson 1911, Lincoln Mayo 1908, R. H. Ranger 1911, and C. A. Woodruff 1911.

Those who are trying for the advertising management are: R. F. Burnett 1910, R. A. D. Preston 1910, D. C. McMurtrie 1910, D. A. French 1910, M. S. Chapin 1911, Dudley Clapp 1910, P. W. Burnham 1911.

The dates for the performances are: April 18, evening, at Providence; Monday, April 20, matinee, Boston; evening, Malden; Tuesday, April 21, matinee, Boston. The Boston performances will probably be at the Colonial as they were last year.

CAPT. HOWLAND MAKES CROSS COUNTRY TEAM.

RUNS A SPECIAL TRIAL.

Conditions Unfavorable But Runner Makes Good Time.

In a special trial that was granted to him Wednesday, Captain Howland of the Cross Country Team qualified at Readville for a place on the team. He ran unpaced six miles under the most unfavorable conditions. The track was very soft, it being muddy for a considerable part of the way.

His time was 35 minutes, 33 seconds, and gives him a place on the team that will represent Tech in the intercollegiate race at Princeton next Wednesday.

Callaway, Gimson, and Stephenson ran five miles from Tech Field, and Batcheider, Ellis, MacCreadie, and McCarthy ran three. Clapp and White ran individually.

The make up of the team will be as follows:—H. H. Howland 1908, captain, H. R. Callaway 1908, B. L. Gimson 1908, J. H. Stephenson 1909, C. J. Batchelder 1908, R. Ellis 1909, W. T. MacCreadie 1911, and J. F. McCarthy 1909. The substitutes will be P. D. White 1911 and C. S. Clapp 1908.

ERROR IN ADDRESS.

Through a mistake in the list given THE TECH, an error was made in a recent issue in the address of A. M. Chidester 1906. It should have been 2321 Madison Square, Station D, Philadelphia.

SEVENTEEN MORE MEN AT TECH NOW.

ENROLLMENT THIS YEAR IS 1390.

Number of College Men Increases as Does Number of Foreign Students.

This year the total enrollment at the Institute is 1390, an increase of 17 over that of last year. The new students have come from almost all of the United States. Only five states are not represented: namely, Delaware, Louisiana, North Dakota, Idaho and Wyoming.

Seventeen foreign countries are also represented. The number of students coming to the Institute from other colleges is greater this year than ever before. There is also an increase in the number of students who have come after having spent only two years at other colleges.

Among the men from the various colleges are:

Albright College, W. H. Wengert, B. S.

Allegheny College, Ralph Edward Irwin, A. B.

Amherst, Brainerd Dyer, A. B.; Claude Thomas Wilson, A. B.

Annapolis, L. S. Border, A.; Harry Ward Cleveland, J. C. Sweeney, Jr., A.; Ernest Albert Redman.

Armour Institute, Hiram Neil Chrichton, Sidney Vincent James, James Bowen Noble, Arthur Morton Rosenblitt.

Beloit, J. C. Baker, B. S.; Wm. Henry Norton, Jr.

Bowdoin, George W. Craigie, A. B.; J. Edward Crowley, M. P. Whipple, A. B.

Boston College, J. F. McMorrow, A. B.

Brown, H. W. Paine, Ph. B.; W. H. Congdon, A. B.; L. C. Eddy, Jr., Ph. B.

Case, T. W. Carlisle.

University of Chicago, W. D. Ives, F. S. Lovewell, J. Mills, B. M. Pettit, Ph. B.

Cincinnati University and Ohio State University, A. C. Batsner.

Colorado College, M. D. Hersey, I. S. James, F. M. Loud.

Cornell, P. B. Johnson.

Dalhousie, E. K. Harvey, A. B.

Dakota Wesleyan, P. C. Laurson, B. S.

Dartmouth, C. R. Main, H. C. Mills, M. N. Prentiss.

Denison University, K. J. Cambell.

DePauw University, L. J. Townes, Ph. B.

Fairmout College, B. H. St. John, A. B.

Grinnell, M. W. Rew, H. B. Winterstein, B. S.

Georgia Tech., A. B. Purdone.

Harvard, B. Bigelow, A. E. Conant, A. B.; B. Dewey; L. Pritchett, A. B.; P. L. Dillon; L. S. Southwick; A. L. Fabens; H. G. Hawes, Jr., A. B.

Haverford, W. W. Warner, R. L. Cary, A. B., A. M.

Hamline University, M. Nickerson.

Holy Cross, C. A. Maguire.

Johns Hopkins, R. E. Kerr, A. K. Knipp, A. B.; T. Machen, A. B.; W. S. Davis, J. B. Hill, B. S. Bonebrake.

Indiana University, L. W. Greely.

Cologie de Guadaloupe, G. Valverde.

Lafayette College, L. Lee.

Lehigh, A. K. Comins.

Marquette University, J. G. Bach, A. B.

Marietta, G. M. Gadsby, Ph. B.

St. Mary's Institute, W. T. Mahoney, B. S.

University of Michigan, W. D. Clark, K. D. Stellwagen.

University of Minnesota, G. G. Holbrock.

University of Illinois, G. W. Dwight.

Notre Dame University, A. L. de Romana.

Massachusetts College. F. E. Mott.

Princeton, A. W. Lunn, A. B.; W. C. Gordon, Jr., C. E.; W. T. Adams, Jr., W. H. Camp, B. S.; J. R. Carson, B. S.

Potsdam Tech., C. P. Echeverria.

(Continued on page 2.)

THE TECH

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Friday, November 22, 1907.

PROF. JAGGER'S TRIP.

Much curiosity has been felt in the scientific world over Prof. Jaggar's recent trip to the Aleutian Islands. His party secured valuable records, photographs, and specimens from these almost unknown islands. An authorative account of the expedition is being prepared by Prof. Jaggar and will be published during the first part of January, simultaneously in the Technology Review and THE TECH.

MEN OF TECHNOLOGY.

Our Cross Country Team leaves for the intercollegiate race at Princeton Monday afternoon. We have a team that is full of grit and loyalty.

There is not a man on the team who, when he starts in that race, will not forget himself and run for Technology. Each is imbued with the spirit of the soldier who brought the news of the battle of Marathon to Athens and dropped dead with the word "Victory" on his lips.

We have the team; are you behind it? To the leaving place, men of Technology, and speak out your feelings! All loyal sons of Tech will be at the Back Bay Station at 5:30 o'clock Monday.

"An raise in swelling chorus
The grand old cheer once more."

Why did our team, though handicapped, bring to the Institute a third last year against the biggest teams of the country? Because a hundred cheered them as the train rolled out.

We had a good team last year; we have a better team this year—eight sturdy men who will fight.

A hundred men inspired the team last year. A thousand will shake the walls of the station with their shouts on Monday.

You will be one of them.

REMEMBER REMEMBER REMEMBER

The Time — 5.30 P.M. Monday.

The Place — Back Bay Station.

The Occasion — Cross Country Team Leaves for Princeton.

"IT TAKES TIME" SAYS SPEAKER.

Dr. Alexander Says That Short-Cuts Fail.

"It Takes Time to do Things Right" was the subject which Dr. Alexander took for his second talk before the Y. M. C. A. yesterday. He said in part:

"God's movements in history, as in the foundation of rocks, takes time. He is never in a hurry. We are always trying to take short cuts. This haste has a reaction. It is breaking down our health as a nation by shortening the period of training for our life work.

"Some things," continued Dr. Alexander, "can be done quietly; most things can't. The short-cut man is a failure at the start. The man is wanted who has served an apprenticeship. He must have not a smattering but a thorough knowledge. It is one thing to get a position; another to hold it down."

SEVENTEEN MORE MEN.

(Continued from page 1.)

Rose Polytechnic, R. W. Eagan, G. G. Brooks.

Rensselaer, E. E. Root.

University of Rochester, H. O. Stewart, B. S.

Richmond (Va.), A. H. Strauss, B. S.

University of Oregon, M. W. Johnson, A. B.

University of South Dakota, E. A. Schwarz.

St. Louis College, E. Suess, B. S.

Sheffield, S. S., E. R. Willson, Pn. B.

Ohio Wesleyan, J. D. Creveling.

Louisiana State University, J. Maramoros.

University of South Carolina, A. Jones, Jr.

St. John's College, I. P. Kane, B. S.

University of Texas, L. Jacoby, A. B.; J. A. Cuyen.

Vassar, Miss H. L. Fales.

Virginia Poly, E. Nicholson, F. D. Robeson, B. S.

University of Virginia, P. Smith, G. E.

Vanderbilt, L. M. Lusky, G. T. Southgate.

Williams, R. P. Waller, A. B.; R. W. Lesser, A. B.

University of Washington, T. Geary, M. P. Anderson.

Washington and Jefferson, O. V. Chamberlin. E. M. Post, A. B.; F. S. James, B. S.

Ohio Wesleyan, J. D. Creveling, B. S.

University of Wisconsin, E. de Garay.

Technical School, Bakon, Russia, G. Torrossian.

Whitman College, H. O'Neill, R. M. Gillis, A. B.

Wesleyan University, P. S. Hopkins.

IMPORTANT TO TRACK MEN

Tech Entered in Open Meet. Entries Close Monday.

Tech will enter a team for a match race with the B. A. A. in the open meet of the Park Square Association on Dec. 4th. All men wishing to try for the team should indicate their intention of so doing immediately.

It is desired to enter all members of the track squad in the open events which comprise a 60 yard dash, a 440 yard dash, a 1,000 yard run, and a 1 1-2 mile run, a high jump, pole vault, and shot put.

The entries close Monday

NOTICE

Students are invited to send literature to Mr. Wm. McIver, Steward of Tech Union, to be distributed by Boston Seaman's Friend Society among the sailors in Boston Harbor.

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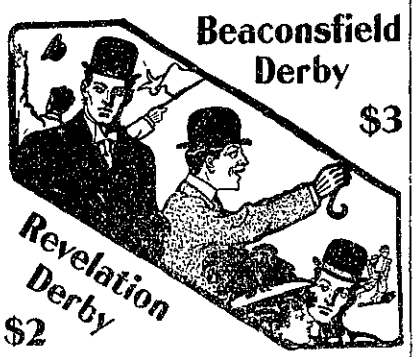

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NEW MATH BOOK.

(Continued from page 1.)

tions are also introduced at this time. Curves are taken up and the student is introduced to this interesting portion of analytic geometry without being confused by the idea that it relates solely to conic sections.

After this, the study of transcedental functions is begun and finally the year's course closes with the study of the parametric representation of curves, polar co-ordinates and curvature. It will be noticed that no work in three dimensions is taken up, that being deferred until the second year.

It has already been stated that the book is primarily for the use of engineering students; it may be questioned, however, whether the student who takes up mathematics as a branch of liberal education will not find this method of approaching the subject more satisfactory than the traditional one of attacking one branch at a time.

The relations between the several branches taught in undergraduate courses is so intimate that it is safe to say that only a student of exceptional natural mathematical ability can acquire as good a knowledge by pursuing one branch after another as by taking them up in the way outlined by Professors Woods and Bailey. The book should also be of service to practicing engineers who wish to review their mathematical studies.

The book is clearly written, well printed and illustrated, and contains a large number of examples which are particularly helpful, for it is well-known that a thorough comprehension of a mathematical method is only possible after it has been applied to the solution of well-selected problems. Attractive in form, and modern in method and expression, the book is especially valuable.

TENNIS ALMOST COMPLETE.

One Final Match in Singles Remains.

The singles in the fall tennis tournament are nearly completed; only the final match between P. M. Wentworth '09, and M. T. Whiting '08, is left. Wentworth, with T. B. Parker '11, has already won the doubles, but Whitings' defeat of Fanning makes him slightly the favorite for the single champion.

First round:—P. R. Fanning defeated C. B. Denison 6-0, 5-0.

Second round:—P. M. Wentworth defeated H. R. Draper 6-2, 6-4; P. R. Fanning defeated T. B. Parker 8-6, 6-1.

Third round:—P. M. Wentworth defeated L. Coffin 4-6, 6-3, 6-4; M. T. Whiting defeated P. R. Fanning 6-4, 4-6, 6-3.

Final round P. M. Wentworth vs. M. T. Whiting.

DEFICIENCIES MUST BE MADE UP.

Faculty Rule on This Subject Given to Students.

All marks of D must be removed at a date to be determined by the respective instructors, which date shall not be later than the end of the following November, but in case of subjects which from the character of the work can be pursued only in the second term, the date shall not be later than the end of the following March.

In case a mark of D is not removed at the date thus determined, the student shall be required to discontinue and dependent subjects which he is taking and can only obtain a clear record by repeating the subject in which the D was given.

No deviation can be made from this requirement but for exceptional reasons. Petitions for an extension of time must be presented before December 1st.

NORWEGIAN PROFESSOR STUDYING INSTITUTE TEACHING METHODS.

Dr. Blanchard Issues Pamphlets on Inorganic Preparations.

Dr. Fjeld Halvorsen of the University of Christiania, Norway, who has been sent by his government to study American methods of teaching technical chemistry is attending the regular lectures and laboratory exercises in industrial chemistry and technical analyses at the Institute. For the past three years Dr. Halvorsen has been studying German methods in the great technical school at Charlottenburg.

Dr. Arthur A. Blanchard has recently issued a series of pamphlets on Inorganic Preparations. The general application of the principles of physical chemistry to preparation work has been strongly emphasized. When completed the series will probably be published in book form.

Added to the equipment of the Mechanical Engineering Department are two machines of interest, a twenty-inch centrifugal machine and a thirty-six-inch hydro-extractor. These are valuable for the experimental study of the laws of running balance with high-speed machinery.

Mr. and Mrs. G. H. Finn, of Clinton Road, Brookline, announce the engagement of their daughter, Christine, to William Engel '07. No date has been set for the wedding.

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CALENDAR.

Saturday, November 23.

2.22 P. M. Hare and Hound Association Leaves Back Bay Station for Highland Station.

Monday, November 25.

4.00 P. M. Athletic Association Meeting in 26 Rogers.

4.00 P. M. Mandolin Club Rehearsal in 33 Rogers.

4.00 P. M. Glee Club Rehearsal at the Union.

5:30 P. M. Cross Country Team Leaves Back Bay Station for Princeton.

FACULTY NOTICES.

FOURTH YEAR.—The lecture in metallurgy will be given Thursdays and Fridays from 4 to 5 o'clock in 2 Rogers, beginning Dec. 5.

MICRO-ORGANISMS.—The class in micro-organisms (3), XI, will meet Friday, Nov. 29, at 9 A. M., in 28 Pierce; and the class in anthropology will meet Tuesday, Nov. 26, at 11 A. M., in the same place.

NOTICES.

1911.—Relay Team and substitutes report on Roger's steps today at 1 P. M. Important.

IOWA MEN.—There will be a meeting for the purpose of organizing an Iowa Club on Tuesday evening, Nov. 26, in room 521, Tech Chambers. Everybody interested come.

The men who have subscription books for THE TECH will please turn them in and settle with G. A. Haynes, Circulation Manager, before Nov. 26, 1907.

MANDOLIN CLUB.—There will be an important rehearsal of the Mandolin Club Friday, Nov. 21, promptly at 4.15. Everyone should be present.

GUITARS WANTED.—Anyone who can play a Guitar is urged to leave a note at the Cage for Nat L. Coleman. We want you in the Mandolin Club.

CLASSIFIED ADS.

Advertisements of this kind under different classifications are inserted at the rate of five cents a line, averaging six words to a line, payable in advance.

FOR SALE.—Tuxedo in first rate condition. Leave note at Cage for P. D. Q.

THE TECH wants two second-hand flat-top desks with drawers. Come up to Room 30 and tell us what you have.

FOUND.—There is at the Bursar's office a gold ring which was found in one of the buildings.

LOST.—Rain coat in locker room, Tech Field. Finder please return to Cage. G. A. Black, '10.

WANTED AT ONCE.—Copies of the first six volumes of Technique in good condition. State price. Box 52, The Cage.

WANTED AT ONCE.—25 copies each of THE TECH, Nos. 1 and 11, appearing on Oct. 2 and 25. Take them to the Cage and get 5 cents for each copy in good condition.

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